

Claims

1. A vacuum device comprising

a plurality of refrigeration devices (10),

a compressor device (16) connected to the refrigeration devices (10) via medium supply conduits (12),

medium return conduits (14) connected to the refrigeration devices (10) and the compressor device (16),

a storage container (20) connected to the medium supply conduits (12) and the medium return conduits (14) via connection conduits (22,24),

a supply valve (26) arranged in the connection conduit (22) between the medium supply conduits (12) and the storage containers (20), and

a control unit (32) connected to a pressure measurement device (30) for measuring the pressure of the medium and to the supply valve (26), provided to control the supply valve (26) in dependence on the measured pressure,

characterized in that

a pressure measurement device (30) is provided only in the medium supply conduit (12) or only in the medium return conduit (14).

2. The vacuum device according to claim 1, characterized in that the determination of a threshold value or threshold range for controlling the

supply valve (26) is performed in dependence on a refrigeration-device characteristic line.

3. The vacuum device according to claim 1 or 2, characterized in that a return valve, connected to the control unit (32), is arranged in the connection conduit (24) between the medium return conduit (14) and the storage container (20).
4. The vacuum device according to claim 1 or 2, characterized in that a nozzle (28) with a preferably small orifice is arranged in the connection conduit (24) between the medium return conduit (14) and the storage container (20).
5. A method for controlling a vacuum device as defined in any one of claims 1-4, wherein,

if the pressure exceeds a maximum threshold value measured by the pressure measurement device (30), the supply valve (26) is opened to cause medium to flow into the storage container (20), and

if the pressure falls below a minimum threshold value measured by the pressure measurement device (30), the return valve is opened to cause medium to flow from the storage container (20) into the medium return conduit (14).

6. A method for controlling a vacuum device as defined in any one of claims 1-4, wherein,

if the pressure exceeds a maximum threshold value measured by the pressure measurement device (30), the supply valve (26) is opened to cause medium to flow into the storage container (20), and

in case of a corresponding pressure difference, medium is caused to flow through the nozzle (28) into the medium return conduit (14) until, due to the change of the pressure difference at the refrigeration devices (10), the pressure in the medium supply conduit (12) exceeds the maximum threshold value.

7. The method for controlling a vacuum device according to claim 5 or 6, wherein the supply of medium by means of the compressor device (16) is continuous.
8. The method for controlling a vacuum device according to any one of claims 5-7, wherein medium is supplied from the storage container (20) only to the medium return conduits.